

TREATY ON INTERNATIONAL COOPERATION IN THE AREA OF PATENTS

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT ON PATENTABILITY

(Chapter II of the Treaty on International Cooperation in the Area of Patents)

Applicant's or Agent's File Ref. 42 338.ze.be	FOR FURTHER ACTION	See Form PCT/IPEA/416
International Application No. PCT/EP2004/013571	International Filing Date (<i>Month/Day/Year</i>) November 30, 2004	Priority Date (<i>Month/Day/Year</i>) December 23, 2003
International Patent Classification (IPC) or National Classification and IPC B21B27/10, B21B45/02		
Applicant SMS DEMAG AG et al.		

1.	This international preliminary examination report has been prepared by the duly commissioned International Preliminary Examining Authority according to Article 35 and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of 5 pages, including this cover sheet.
3.	<p>This report is also accompanied by ANNEXES; these comprise</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> (<i>sent to the applicant and the International Office</i>) a total of pages; these are</p> <div style="margin-left: 40px;"> <input type="checkbox"/> pages of the description, claims, and/or drawings which have been amended and are the basis for this report and/or pages containing rectifications that have been approved by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> pages which replace earlier pages but which, for the reasons given in field No. 1, item 4, and in the supplementary field, in the opinion of this Authority, contain a change that goes beyond the disclosed contents of the international application in the version originally submitted. </div> <p style="margin-left: 20px;">b. <input type="checkbox"/> (<i>sent only to the International Office</i>): (please specify the type and number of the electronic data carrier(s)), which contain a sequence listing and/or accompanying tables, only in computer-readable form, as specified in the supplementary field regarding the sequence listing (see Section 802 of the Administrative Instructions)</p>
4.	<p>This report contains indications relating to the following items:</p> <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Field No. I Basis of the report <input type="checkbox"/> Field No. II Priority <input type="checkbox"/> Field No. III Nonestablishment of opinion with respect to novelty, inventive activity, and commercial viability. <input type="checkbox"/> Field No. IV Lack of unity of the invention <input checked="" type="checkbox"/> Field No. V Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination <input type="checkbox"/> Field No. VI Certain documents cited <input type="checkbox"/> Field No. VII Certain defects in the international application <input type="checkbox"/> Field No. VIII Certain observations on the international application </div>

Date of submission of the petition: April 21, 2005	Date of completion of this report: November 23, 2005
Name and mailing address of the office assigned to perform the preliminary examination: European Patent Office D-80298 Munich Tel: +49 89 2399-0 Tx: 523656 epmu d Fax: +49 89 2399-4465	Authorized Officer: Forciniti, M. Tel: +49 89 2399-

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT ON
PATENTABILITY**

International File No.: **PCT/EP2004/013571**

10/584174

23 JUN 2006

Field No. I Basis of the Report

1. With respect to the **language**, the report is based on the international application in the language in which it was submitted unless otherwise indicated under this item.
 - ☐ The report is based on a translation from the original language into the following language, which is the language of the translation, which was submitted for the following purpose:
 - ☐ international search (under Rules 12.3 and 23.1 b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rule 55.2 and/or Rule 55.3)
2. With regard to the **constituent parts*** of the international application, the report is based on *(replacement pages which were submitted to the application office in compliance with a request according to Article 14 are considered "originally filed" in the context of this report and are not attached to the report)*:

Specification, pages:

1-7 as originally filed

Claims, Nos.:

1-6 as originally filed

- ☐ a sequence listing and/or any accompanying tables – see supplementary field regarding the sequence listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description: pages
 - ☐ the claims: Nos.
 - ☐ the drawings: sheets/figures:
 - ☐ the sequence listing (*exact details*):
 - ☐ any tables accompanying the sequence listing (*exact details*):
 4. ☐ This report has been prepared as if (some of) the amendments attached to this report and listed below had not been made, since for the reasons specified in the supplementary field they are considered by this Authority to go beyond the disclosure as originally filed (Rule 70.2 c)).
 - ☐ the description: pages

- ☐ the claims: Nos.
- ☐ the drawings: sheets/figures:
- ☐ the sequence listing (*exact details*):
- ☐ any tables accompanying the sequence listing (*exact details*):

* If Item 4 applies, some or all of these pages can be furnished with the comment "replaced."

Field No. V Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination

1. Determination

Novelty (N)	Yes:	Claims 1-6
	No:	Claims
Inventive Activity (AI):	Yes:	Claims 1-6
	No:	Claims
Commercial Viability (CV):	Yes:	Claims 1-6
	No:	Claims

2. Documents and Declarations (Rule 70.7):

See attached pages.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT ON
PATENTABILITY (ATTACHED PAGES)**

International File No.: **PCT/EP2004/013571**

Re Item V

Substantiated determination under Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination

V.1. The following document is cited:

D1: JP-06-063634 A

V.2. The present application satisfies the requirements of Article 33(1) PCT, because the object of **Claim 1** is novel in accordance with Article 33(2) PCT:

Document **D1** discloses:

A method for the rolling of rolling stock (3), especially for the rolling of hot-rolled wide strip in a finishing train or a continuous casting installation, in which a lubricant (9') is applied directly to the surface of the work rolls (2) or indirectly to the surface of the backup rolls and is then transferred to the surface of the work rolls, before the rolling stock (3) enters the roll gap of a rolling stand, wherein a strongly adherent lubricant film forms on the surface (12) of the work rolls and leads to reduction of friction in the roll gap as an intermediate layer between the roll and the rolling stock.

The object of **Claim 1** thus differs from the method disclosed by **D1** by virtue of the fact that the lubricant is applied over the entire length of the rolling stock, and therefore the lubricating effect acts over the entire length of the rolling stock.

V.3. The solution proposed in **Claim 1** of the present application is inventive for the following reasons (Article 33(3) PCT):

The features of **Claim 1** bring about a reduction of the rolling forces as the rolling stock enters the roll gap and produce constant lubrication over the length of the rolling stock, so that a constant mass flow is obtained.

Document **D1** is regarded as the prior art most closely related to the object of **Claim 1**. Taking this prior art as the point of departure, the objective to be achieved can be seen as the qualitative improvement of the rolling process and the reduction of roll wear and power consumption. This objective is achieved in a way that is not obvious by the features of **Claim 1**, in particular, by applying the lubricant over the entire length of the rolling stock. **D1**, on the other hand, discloses only that the lubrication is started only after the rolling stock enters the roll gap. Accordingly, the lubrication is not carried out over the entire length of the rolling stock. **D1** also fails to suggest this type of lubrication.

V.4. Dependent **Claims 2 to 6** further develop the object of **Claim 1** and thus also satisfy the requirements of the PCT with respect to novelty and inventive activity (Articles 33(2)(3) PCT).

V.5. The object of **Claims 1 to 6** is unquestionably commercially viable (Article 33(4) PCT).